2023

Report to Congress

Update on the Access, Exchange, and Use of Electronic Health Information through Trusted Networks

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The Office of the National Coordinator for Health Information Technology, Office of the Secretary, United States Department of Health and Human Services

HealthIT.gov

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Office of the National Coordinator for Health Information Technology

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Statutory Requirement

Division A, Title XIII, Section 13113(a) of the American Recovery and Reinvestment Act of 2009 (P.L. 111-5), as part of the Health Information Technology for Economic and Clinical Health Act (HITECH Act), requires the Secretary of Health and Human Services (HHS) to provide a report to Congress as follows:

(a) REPORT ON ADOPTION OF NATIONWIDE SYSTEM. Not later than 2 years after the date of the enactment of this Act and annually thereafter, the Secretary of Health and Human Services shall submit to the appropriate committees of jurisdiction of the House of Representatives and the Senate a report that:

1. describes the specific actions that have been taken by the Federal Government and private entities to facilitate the adoption of a nationwide system for the electronic use and exchange of health information;
2. describes barriers to the adoption of such a nationwide system; and
3. contains recommendations to achieve full implementation of such a nationwide system.

This report is the latest update by the Secretary of HHS in fulfillment of section 13113(a). To review previous reports, please visit HealthIT.gov.

Executive Summary

This report focuses on the significant progress made connecting health information networks (HINs) and health information exchanges (HIEs) nationwide.

While HINs and HIEs nationwide have made considerable progress, each has certain limitations that the Trusted Exchange Framework and Common Agreement℠, or TEFCA℠, is designed to address.

TEFCA simplifies network participation by providing a way for health care providers, health plans, patients, and others to make a single connection to access electronic health information on a nationwide scale. TEFCA also supports a broader range of exchange purposes, including treatment, payment, health care operations, public health, government benefits determination, and individual access services.

Executive Summary (Cont.)

On December 12, 2023, an initial group of Qualified Health Information Networks™ (QHINs™) were designated and started sharing electronic health information through TEFCA. On February 13, 2024, two additional QHINs were designated. In the coming months and years, ONC expects that TEFCA will rapidly build on this momentum and scale to include more organizations, creating a pathway for modern health information sharing. This includes:

- Advancing common standards and use of modern health IT capabilities, such as the United States Core Data for Interoperability (USCDI) and Health Level Seven (HL7®) Fast Healthcare Interoperability Resources (FHIR®) application programming interfaces (APIs)
- Establishing expected business practices for sharing electronic health information

HHS recommends support for the implementation of the 21st Century Cures Act (P.L. 114-255) health IT provisions, including TEFCA.

Update on the Access, Exchange, and Use of Electronic Health Information

- ONC provided Congress with an update in February 2023 on progress, barriers, and recommendations related to the access, exchange, and use of electronic health information.
- The barriers and recommendations identified in that update remain relevant.

This 2023 Report to Congress:

- Focuses on the significant progress made over the past year to connect nationwide, trusted HINs
- Serves as an update to the information in the 2020-2025 Federal Health IT Strategic Plan regarding the progress of implementation efforts

The Digital Transformation of Health Care

All different types of technology have become vital to everyday life. What is sometimes taken for granted are the key factors leading to this transformation. For example, the smartphone experience we have today, among other factors, required:

- An evolution in wireless standards;
- Carriers willing to make investments in nationwide networks;
- Legal and policy agreements to bridge connections; and
- Market pressures to bring transaction costs down.

A similar shift is happening – right now – in health care, and ONC is at the forefront.

Current State: Sharing Electronic Health Information through Networks

Building on past government and industry efforts, progress continues through the implementation of HHS regulatory requirements and a commitment to modernize the U.S. public health data systems that were stressed by the COVID-19 pandemic.

Current State

- **85 percent** of U.S. hospitals reported electronically querying or finding patient health information through various methods (e.g., HINs) in 2022.
  Source: ONC Quick Stat – Electronic Health Information Exchange by Hospitals
- About half of physicians reported electronically searching or querying for patient health information via their EHR when seeing a new patient in 2021.
  Source: ONC Quick Stat – Electronic Health Information Exchange by Hospitals
- **64 percent** of U.S. hospitals reported using national networks that enable exchange across different health IT systems in 2021.
  Source: ONC Data Brief #64
- HIEs are one of the most common methods used by U.S. hospitals to electronically send and receive summary of care records.
  Source: ONC Data Brief #64

Current State: Sharing Electronic Health Information through Networks (Cont.)

Barriers

- U.S. hospitals reported several key challenges to exchanging electronic patient health information to or from other care settings or organizations. In 2021, **72** percent of U.S. hospitals reported challenges exchanging data across different EHR vendor platforms and **54** percent reported challenges developing customized interfaces. Additionally, **57** percent of hospitals reported challenges matching or identifying the correct patient between systems.

  Source: ONC Data Brief #64

- About three-quarters of U.S. hospitals reported experiencing at least one challenge to electronic public health reporting in 2022. Several challenges reported by hospitals include a cumbersome onboarding process for electronic reporting; costs related to interfaces, transmission, or submission; and hospitals feeling that public health agencies lack the capacity to electronically receive information.

  Source: ONC Data Brief #66

TEFCA Participation

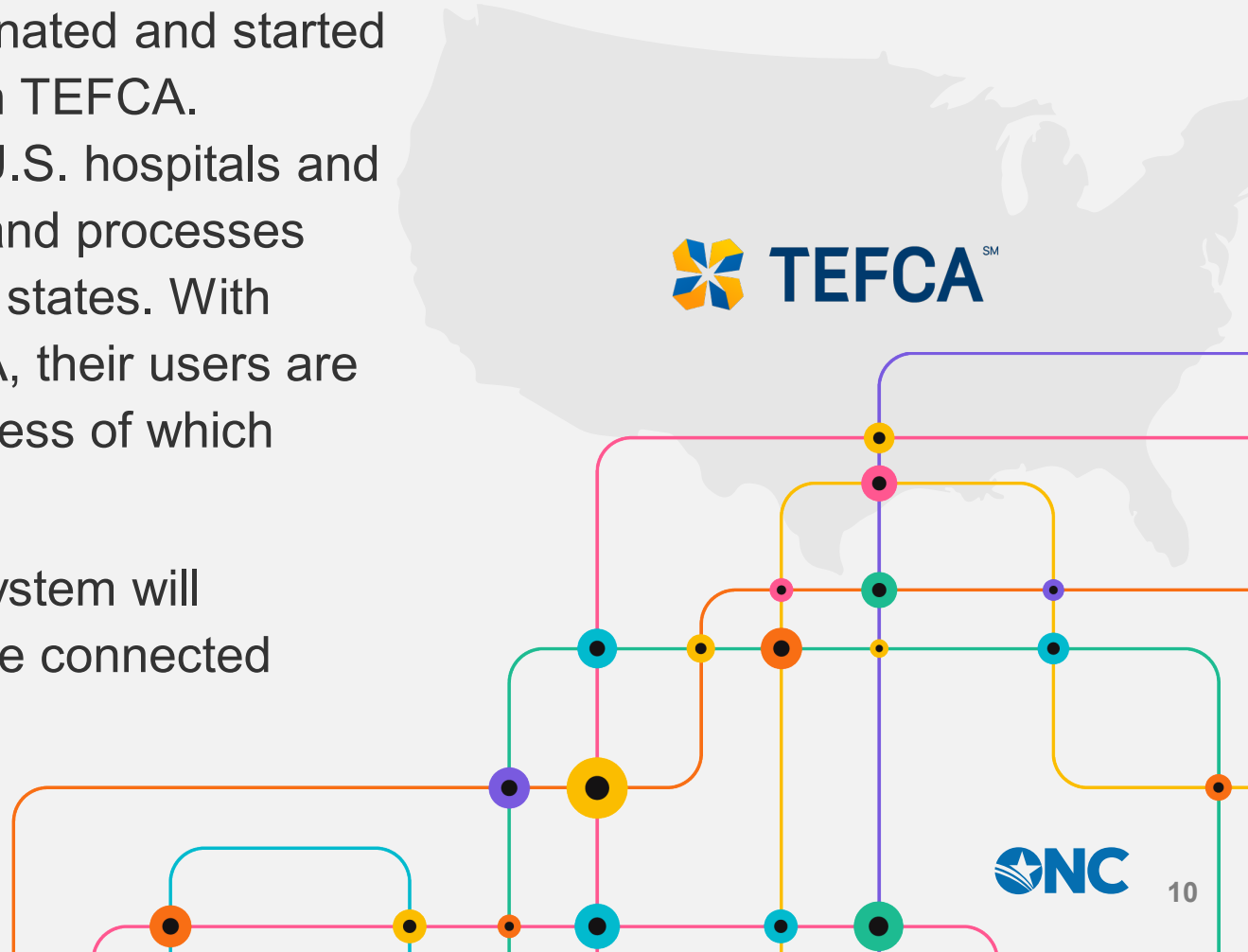
- Most U.S. hospitals are aware of TEFCA and plan to participate.

  Source: Quick Stat – Non-Federal Acute Care Hospitals' Awareness of and Plans to Participate in Trusted Exchange Framework and Common Agreement (TEFCA)

- As of February 2024, 7 QHINs can share electronic health information through TEFCA.

Connected Health Information Networks Will Touch the Lives of People Across the Country

- In 2023, the first group of QHINs were designated and started sharing electronic health information through TEFCA. Collectively, this set of QHINs covers most U.S. hospitals and tens of thousands of health care providers, and processes billions of annual transactions across all fifty states. With these QHINs working together under TEFCA, their users are now able to connect with each other, regardless of which network they are in.
- Nearly everyone that uses the health care system will eventually experience the benefits from these connected HINs.



Connected Health Information Networks Can Benefit Multiple Groups

Multiple groups can experience benefits as sharing electronic health information under TEFCA scales in the coming months and years.

- **Individuals** can more easily gather their health information from multiple health care providers and other organizations participating in TEFCA through different applications and services
- **Health Care Providers and Health Systems** can improve care coordination and population health by obtaining a more informed picture of care across settings through fewer connection points
- **Health Plans** can access and share data needed for care management, value-based care, payer-to-payer exchange, and other similar purposes
- **Technology Developers** can provide a scalable policy and technical foundation for innovation
- **State Governments and Public Health Authorities** can establish easier connections, get timelier public health data, reduce costs for sharing public health data, and support public health interoperability

Increase in Connected Health Information Networks

Several factors contribute to enhanced interoperability across HINs nationwide, including:

Increased use of certified health IT by office-based physicians, hospitals, health systems, and other health care providers, moved the industry to more frequently exchange health information electronically

Modern health care data sharing standards (e.g., FHIR) are maturing and becoming widely adopted alongside greater industry alignment around the use of the USCDI

The 21st Century Cures Act, and the subsequent ONC information blocking regulations, shifted the legal paradigm related to the exchange of electronic health information with an emphasis on data sharing and interoperability

Role of TEFCA in Connecting Health Information Networks

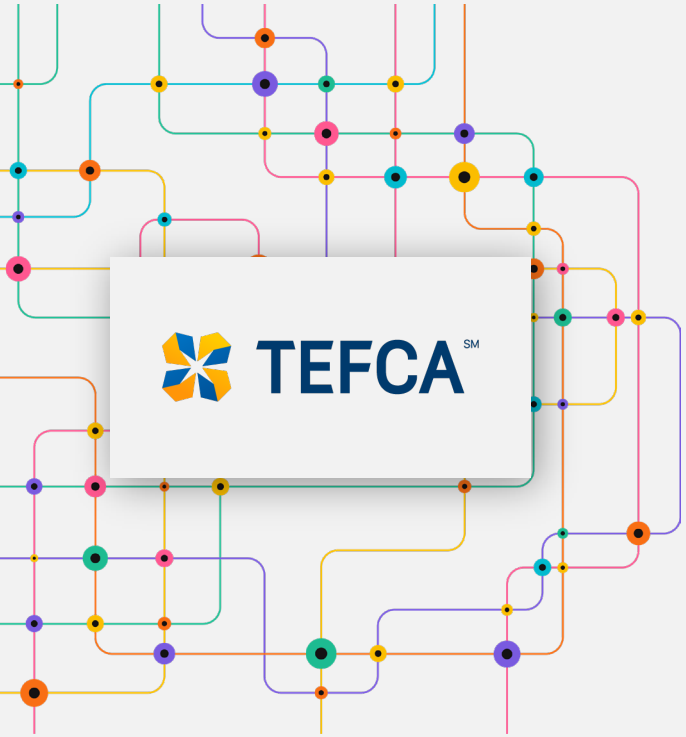
Nationwide HINs currently facilitate the secure exchange of millions of clinical documents for treatment daily. State or regional HIEs provide localized interoperability services in many parts of the country. Despite this significant progress, many smaller health care providers, including ambulatory and post-acute care, still have limited connection to HINs and HIEs.

Federal government involvement will help evolve interoperable electronic health information sharing across networks nationwide.

TEFCA is designed to ensure full network-to-network exchange of health information, which it accomplishes by:

- Establishing a universal governance, policy, and technical floor for nationwide interoperability
- Simplifying connectivity for organizations to securely exchange information to improve patient care, enhance the welfare of populations, and generate health care value
- Enabling individuals to gather their health care information

Benefits of Connecting Health Information Networks Through TEFCA



As outlined in the Trusted Exchange Framework: Principles for Trusted Exchange, connecting HINs through TEFCA will:

- Increase secure access to electronic health information exchange capabilities nationwide
- Work towards ensuring that a core set of data will be available and standardized among networks connected through the Common Agreement for multiple exchange purposes
- Decrease costs and improve efficiency by reducing or eliminating the need to join multiple HINs, sign multiple legal agreements, or create one-off interfaces
- Provide HINs and health IT developers with a common set of privacy and security requirements to protect patient health information, including requirements for identity proofing and authentication

TEFCA Components

TEFCA has several components, including:

- The Trusted Exchange Framework, which is a common set of principles for policies and practices to facilitate data sharing among HINs.
- The Common Agreement, which is the agreement that binds HINs to baseline governance, legal, and technical requirements for secure electronic health information sharing nationwide.
    - ONC and the TEFCA Recognized Coordinating Entity® (RCE™) released the Draft Common Agreement 2.0 in January 2024, which included specific technical and clarifying changes in preparation for FHIR-based exchange through TEFCA.
- The QHIN Technical Framework (QTF), which describes the functional and technical requirements that a HIN must fulfill to serve as a QHIN under the Common Agreement. The QTF also describes high-level functional requirements QHINs must support for exchange within their HINs.

TEFCA Establishes Policy and Technical Requirements for Sharing Electronic Health Information

The Common Agreement establishes clear policy and technical requirements for the exchange of information by organizations participating in TEFCA. It describes and defines such organizations as QHINs, Participants, and Subparticipants, among others.

This means that TEFCA QHINs, Participants, and Subparticipants know what business practices are expected of their organization and what to expect from all the other participating organizations.

TEFCA, along with the QTF, provides:

- A shared governance structure for all QHINs
- A structured onboarding process to ensure QHINs can adhere to the Common Agreement requirements
- Common protocols for authenticating and authorizing users
- A shared directory service to support exchange of electronic health information
- Guidance on how QHINs respond to all data requests as may be required under the Common Agreement
- Guidance on how QHINs are prohibited from requiring broad exclusivity arrangements from other participating organizations and from imposing discriminatory limits on those organizations sharing electronic health information consistent with existing regulations
- Guidance on compliance with relevant privacy and security rules
- A security incident notification process

TEFCA Provides Strong Privacy and Security Protections

Organizations participating in TEFCA will have strong privacy and security protections in place as described in the Common Agreement.

The Common Agreement requires each Non-HIPAA Entity to protect individually identifiable information that it reasonably believes is TEFCA Information in substantially the same manner as HIPAA Covered Entities protect Protected Health Information, including, where appropriate, by complying with the standards required by most provisions of the HIPAA Privacy Rule.

Most participating organizations will be Health Insurance Portability and Accountability Act of 1996 (HIPAA) Covered Entities or Business Associates of Covered Entities, required to comply with HIPAA privacy and security requirements.

An important feature of TEFCA is the added protections it provides where QHINs, Participants, and Subparticipants facilitate patients using technologies (e.g., applications) that fall outside of HIPAA regulations.

Initial Exchange Purposes Supported by TEFCA

QHINs under TEFCA will initially support secure electronic health information sharing for the following specific purposes:

- Individual access services
- Treatment
- Payment
- Health care operations
- Public health
- Government benefits determination

Individuals, health care providers, health plans, public health authorities, and government agencies routinely need to query HINs for these purposes.

For example:

- Patients with multiple health care providers want to manage their own health information through consumer-facing applications without visiting each patient portal across all their health care providers
- Primary care physicians and specialists need to have their patient's health information available to coordinate care
- Public health authorities performing case investigations need to understand previous care provided to a particular patient

Qualified Health Information Networks Can Drive Use of Common Standards and Expected Business Practices

QHINs implement common standards and expected business practices to operate effectively. Through TEFCA:

- QHINs sign an agreement, the Common Agreement, with the RCE committing to adhere to the established requirements within the Common Agreement and the QTF
- These requirements drive the adoption of common standards and expected business practices across all participating organizations that exchange health information through TEFCA
- TEFCA is creating a pathway to take advantage of FHIR-based application programming interfaces (APIs) that are now included in many health IT products certified through the ONC Health IT Certification Program. The pathway to incorporating these modern data sharing standards includes:

Publishing FHIR Roadmap for TEFCA Exchange Version 2.0

Continuing to support the expansion of exchange mechanisms to include FHIR within TEFCA

Widespread adoption of TEFCA will result in increased use of common standards (e.g., USCDI; FHIR) and agreed-to business practices (e.g., how to authenticate users; privacy protections).

Advancing Common Standards and Use of Modern Health IT Capabilities

The TEFCA infrastructure builds on tremendous progress already made in the health care and health IT ecosystem over the past decade to advance nationwide interoperability.

- Common standards, including the USCDI and FHIR, promote interoperability and consistency across networks
- The Health Data, Technology, and Interoperability: Certification Program Updates, Algorithm Transparency, and Information Sharing (HTI-1) Final Rule includes updates to enhance the accuracy and completeness of patient data that can be used to help promote health equity, reduce health disparities, and support public health data interoperability
- Hundreds of thousands of clinicians and most hospitals and health systems use health IT certified through the ONC Health IT Certification Program that support:

Data element capture using the USCDI standard	Standardized APIs for patient and population services	Electronic health information export for a single patient and for an entire patient population	Multi-factor authentication and encryption of authentication credentials

- **4 in 5** non-federal acute care hospitals use APIs to enable health care provider applications to write data to and read data from certified health IT, and to grant patient access to data in those systems through patient-facing applications.

  Source: ONC Data Brief #68

- TEFCA will advance the use of standards such as USCDI and FHIR.
  - The FHIR API standard can move the health care industry from sharing information structured in documents and messages to exchanging individual data elements, like modern data sharing approaches experienced in other industries.

Establishing Expected Business Practices for Sharing Electronic Health Information

HHS rulemaking, oversight, and enforcement are integral to make interoperable sharing of electronic health information the norm in health care.

- HHS Office of Inspector General (OIG) Information Blocking Enforcement Final Rule: As of September 1, 2023, if HHS OIG determines that a health IT developer of certified health IT, a HIN, or a HIE committed information blocking, the information blocking actor may be subject to civil money penalties.
- 21st Century Cures Act: Establishment of Disincentives for Health Care Providers That Have Committed Information Blocking Proposed Rule: The Proposed Rule proposes to establish a set of appropriate disincentives for health care providers that commit information blocking as determined by HHS OIG.
- Health Data, Technology, and Interoperability: Certification Program Updates, Algorithm Transparency, and Information Sharing (HTI-1) Final Rule: The Final Rule revises certain information blocking definitions and exceptions to support information sharing, and adds a new exception to encourage secure, efficient, standards-based exchange of electronic health information under TEFCA.

Beginning of the TEFCA Era

QHINs are now able to begin sharing electronic health information through TEFCA. The organizations that applied to be QHINs stepped up to meet the rigorous TEFCA eligibility requirements and terms and conditions for participation.

ONC and the RCE are working to onboard applicant QHIN organizations on a rolling basis and to expand TEFCA to reach its full potential.

ONC and the RCE are providing education on TEFCA to the public by developing TEFCA resources such as Standard Operating Procedures and holding public education sessions. The RCE has conducted nearly 170 public engagement events, reaching over 10,000 individuals.

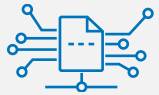
ONC is actively engaged with federal agencies interested in participating in TEFCA, including those that provide health care services, and is exploring opportunities to incorporate TEFCA into federal programs.

What's Next?

TEFCA marks a new era for network-to-network interoperability in the U.S., combining the richness of API-based exchange and the foundation of TEFCA's shared infrastructure and trust services. The following describe how TEFCA will reduce administrative burden while expanding the use of FHIR and advancing interoperability for public health and state and local HIEs.

Administrative Burden
TEFCA will help to catalyze Centers for Medicare & Medicaid Services (CMS) initiatives to promote FHIR-based exchange such as Patient Access APIs and the Provider Access, Payer-Payer, and Prior Authorization APIs finalized in the recent CMS Interoperability and Prior Authorization Final Rule. This will improve the customer/patient experience, enhance care management/coordination, reduce burden through payer-provider interoperability, and support the National Directory of Healthcare Providers & Services concept.

FHIR
In 2024, QHINs are expected to adopt and support FHIR-based API exchange for providers, payers, patients, and others through the finalized version of Common Agreement 2.0. This FHIR-based API exchange is expected to leverage TEFCA trust services, such as endpoint directories, and enable authorized record location services.



Public Health
TEFCA will support the Centers for Disease Control and Prevention's Public Health Data Strategy and state/local Public Health Agencies (PHA) by advancing the use of FHIR in public health; reducing the burden of data collection; enabling secure, modern data exchange between PHAs; and facilitating bidirectional data exchange between clinical and public health communities.

State/Local HIEs
TEFCA will create an information "super-highway" to support state/local interoperability initiatives and to enable them to securely connect with each other.

Congressional Support for Connecting Health Information Networks through TEFCA

HHS, in collaboration with federal partners, will continue its progress on actions that improve the access, exchange, and use of electronic health information to:

Promote health and wellness

Enhance the delivery and experience of care

Build a secure, data-driven ecosystem to Accelerate Research and Innovation

HHS thanks Congress for the vision, passage of, and continued commitment to the 21st Century Cures Act. HHS recommends support for the implementation of the health IT provisions in the Cures Act.

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